CHAPTER FOUR

DEVELOPMENT ALTERNATIVES

The primary objective of this chapter is to identify a feasible set of facility development options for meeting the projected aviation demand discussed in Chapter Two. Chapter Three presented the general facility requirements that should be planned for during the 20-year planning period. This chapter will discuss how to meet these objectives in the most effective and efficient manner.

4.1 SUMMARY OF FACILITY REQUIREMENTS

Development alternatives were formulated to meet the airside and landside facilities requirements at the Airport. The following summarizes the key improvements that were recommended:

- Recommended airside improvements
  - Extend runway 9L/27R to 6,000 feet
  - Install HIRL on 9L/27R
  - Install a precision approach on 27R (ILS with MALSR)
  - Taxiway improvements
- Recommended landside improvements
  - Construct approximately 50 additional T-hangars
  - Construct conventional and corporate hangars
  - Develop northern building area
  - Construct new terminal/administration building
  - Construct new Flight Education Center
  - Develop proposed Historical Research and Education Center
  - Develop additional aircraft maintenance building
  - Install self-fueling system
  - Provide adequate parking for existing and proposed buildings
  - Improve both on-street and on-site vehicular and pedestrian directional signage
  - Improve the service roadway system
  - Implement security initiatives

4.2 AIRSIDE DEVELOPMENT ALTERNATIVES

Development alternatives for major airside improvements are discussed in the following sections. It should be noted that a No-Build or the "Do-Nothing" alternative is also discussed as appropriate.

4.2.1. Primary Runway Development

As mentioned above, the primary airside development recommendation is the extension of a runway to 6,000 feet. As discussed in the previous chapter, providing a 6,000-foot-long runway is justified to accommodate the growing based and itinerant fleet of business jets using the

Airport. The 1990 Master Plan Update first evaluated two development alternatives for the construction of a 6,000-foot-long runway. These options are summarized below:

- Extend Runway 9R/27L – A 1,000-foot extension to Runway 9R would include the acquisition of approximately 27 acres of residential property containing 112 housing units. This land acquisition would be recommended to support a clear runway safety area. Upgrading the approach to Runway 27L to precision instrument capability would require the acquisition of approximately 12 acres of single-family residential property, containing approximately 20 homes.
- Extend Runway 9L/27R – The 1990 master plan and ALP recommended an 1,800-foot extension to Runway 9L and a 1,200-foot expansion to Runway 27R, producing a total runway length of 6,000 feet. This alternative was recommended for a variety of reasons including the following:
  - Minimizes land acquisition to accommodate RPZs.
  - Was compatible with University land use planning.
  - Provide the Airport with two runways that could accommodate precision instrument operations.
  - Provide Airport with two runways that can accommodate business jet operations.
  - Provide the ATCT with more options to balance arrivals and departures, thereby decreasing operations over environmentally sensitive residential areas.

While not discussed in the 1990 master plan, taxiways are now recommended to connect both northern runway ends with their southern counterparts. These taxiways will improve airfield access and increase the efficiency of aircraft movements from north to south and vice versa.

The benefits discussed above regarding the extension of Runway 9L/27R are unchanged today. The primary recommendation is that Runway 9L/27R be extended to 6,000 feet.

A No-Build Alternative would not meet the current and projected demand at the Airport. As discussed in the previous chapter, a runway length of approximately 6,000 feet is justified.

4.2.2 Crosswind Runways Development

Only one alternative was considered for the two crosswind runways (Runways 5/23 and 14/32). Runway 14/32 will be closed upon the extension of Runway 9L/27R. This runway is sees very little use, it intersects the primary and parallel runways near their midpoints, the cost savings of not maintaining is considered significant, and the land in the runway's RPZs are critical to non-airport development around the facility.

A No-Build Alternative would leave Runway 14/32 unchanged and was not recommended in light of its limited usage, its impact on development, and the ultimate cost of maintenance.

4.2.3 Upgrade Approaches

The 1990 master plan recommended upgrading various approaches to the Airport. This master plan update recommends the following:

- Precision Approach to Runway 27R – While the Airport has an existing ILS approach to Runway 9R, a second approach would provide a backup when the current ILS is down for repair or when Runway 9R/27L is closed. More importantly, a second precision approach will provide air traffic controllers with additional options for routing IFR traffic. An additional precision approach from the east to the north runway will improve the ATCT's flexibility with noise abatement. Development of a precision approach for Runway 27R is contingent on extending this runway. Available land, operational factors, and the location of residential and University structures limited serious consideration for a precision approach alternative for Runways 27L or 9L.
- Backcourse Approaches – It is recommended that localizer backcourse approaches be considered for Runway 27L and Runway 9L. These additional non-precision approaches would require no additional instrumentation (if an ILS is installed on Runway 27R). Existing approaches appear to accommodate a backcourse approach. This will provide the Airport with an additional navigational aid with little additional cost. This approach would be a benefit for pilot training, as well as improve pilots' options during IFR conditions.
- Do-Nothing Alternative – As discussed above, an additional precision approach will provide the Airport with further options during IFR conditions. Two precision approaches from different sides of the Airport will also increase noise abatement options. The Do-Nothing alternative was not considered in the best long-term interests of the Airport.

4.3 LANDSIDE ALTERNATIVES

Landside development alternatives are generally limited to infill and selective redevelopment of the southern terminal area in the short term. As University property becomes available for Airport use, development of a new northern building area is warranted to support increasing demand for aircraft storage. Developing the northern building area would also provide the Airport with the greatest flexibility to accommodate additional corporate tenants. Key components of each development area is discussed below:

- Infill/Redevelop Southern Building Area – While the southern building area contains most of the Airport's landside infrastructure, many of the public buildings (administration building, terminal area, and associated hangars) where built in the 1940's and 1950's and are outdated and in need of expansion and/or repair. Other improvements are needed to meet the ever-changing demands of the aviation industry and the traveling public.
    - To maximize the efficiency of the southern terminal area, it was recommended that the existing administration building be demolished and a combined administration/terminal building be constructed between Hangar 1 and the existing Flight Education Building. This will allow for the development of increased terminal

space, a business center, state-of-the-art conference facilities, office space for aviation-related organizations and firms, a restaurant overlooking the airfield, and an expanded parking area and improved traffic flow to the terminal area.

- Additional T-hangars, a corporate hangar, and a maintenance storage building are proposed as infill development to the east of the proposed terminal/administration building.
- A new Flight Education Center is necessary to meet the demands of the University's growing Flight Education Program. This facility will provide updated classroom, office, flight dispatch, and simulator space, in addition to a hangar to store the University's aircraft fleet.
- A proposed Historical Research and Education Center is sited on the western side of the airfield. This location was selected to due to its potential for airfield access and automobile access from Sawmill and West Case Roads. In addition, penetrations to Part 77 surfaces are avoided and the Airport's RPZs and RSAs are unaffected.
- A proposed stand-alone rental car facility with an office/customer service area, wash bay, service bay, and secured long-term parking site.
- Other facilities necessary to meet the demands of the industry include a new aircraft maintenance shop, and a self-fueling system for piston aircraft.

This infill development will maximize the existing developable property on the south side of the Airport.

- Develop Northern Building Area – As discussed above, the Airport has limited building sites on the southern side of the airfield. The north side of the Airport, however, has the greatest potential for new development. The former National Guard apron and the area to the west both have the potential to accommodate additional aircraft storage opportunities. A general layout for this area was developed to allow for the greatest flexibility. As demand is identified, this area can easily accommodate offices and corporate hangars in a variety of combinations. A "Service" building and associated fuel facility should be constructed on the northern building area.
- Following the events of September 11, 2001, airport security has moved to the forefront of the airport development arena. Although the FAA has yet to release security requirements for general aviation facilities, the University Airport has taken a proactive approach to addressing the security issue. A two-phased security program is proposed, with the first phase improving the fencing, gating, and access control around the terminal building and corporate hangars, and the second phase concentrating on the personal aircraft areas and Airport perimeter.

The recommended landside alternative for the Ohio State University Airport is to proceed with development of the southern building area. When University property is available for Airport use, demand should be assessed with regard to what type of storage buildings should be constructed on the north side. Considering the sites proximity to Runway 9L/27R, for which an extension is planned, corporate aviation opportunities should be considered likely. A No-Build alternative would not meet the growing needs of the Airport. A mid-field development scenario was considered; however, ground access, aircraft taxi distances, line-of-site concerns, and capital

requirements make such a development scenario unattractive when compared to development of the northern site.

4.4 ALTERNATIVE SUMMARY

The recommended airside and landside development alternatives are as follows:

- Extend Runway 9L/27R to 6,000 feet
- Precision approach to Runway 27R
- Backcourse approaches to runways 27L and 9R
- Taxiway connections from Runway end 9R to Runway end 9L and from Runway end 27R to Runway end 27L
- Infill/redevelopment of the southern building area
- Develop northern building area when appropriate

These development options will be depicted on the airport layout plan (ALP).

4.5 AIRPORT MANAGEMENT/OPERATIONAL CONSIDERATIONS

One goal of the University in undertaking the Airport master planning process is to identify development initiatives that can realistically be implemented within both the physical constraints, and within the management/operational framework of the facility. In support of and upon implementation of the development initiatives outlined above, the Airport Administration will institute a number of management/operational objectives, as follows:

- Identify Runway 9L/27R as the Airport's "commercial" runway, with respect to the facility's Federal Aviation Regulation, Part 139 operating certificate.
- Instruct air traffic control and corporations that all corporate traffic uses Runway 9L/27R unless special circumstances would make the use of Runway 9L/27R inadvisable.
- Limit night operations to Runway 9L/27R.
- Encourage companies that regularly utilize the Airport during nighttime hours to alter their operations in a way that will allow them to conduct most of their activities at the Airport during the time period between 7:00 a.m. and 11:00 p.m.
- Any University sanctioned approach practice in jet and turboprop aircraft will be limited to the period from dawn to dusk. "Touch and go" activities or repeat takeoffs and landings in piston aircraft will continue to be restricted between the hours of 11:00 p.m. and 7:00 a.m.
- Coordinate with the FAA to determine the most appropriate flight tracks for both in-bound and out-bound air traffic.
- Encourage based corporations to relocate their flight operations to the north side corporate airpark.
- Utilize self-fueling capabilities for smaller, piston-engine aircraft, thereby improving the operating efficiencies of the Airport while lowering the cost to the customer. This initiative will require close coordination with the State Fire Marshall, since such activity, unless previously approved, is currently prohibited.

- Enhance the security of the Airport through controlled access to aircraft storage and movement areas, while maintaining the "openness" of the general aviation industry. Initiatives to assist the Airport in this objective include relocating all aircraft utilizing tie-downs to the west ramp for better visual monitoring, and providing all organizations and clubs with a centrally located office.
- Service north side customers from a satellite office located in the Northern Building Area. Split locations challenge the Airport Administration to operate two separate, yet related, operations.
- The Airport will continue to coordinate with neighbors to jointly provide for noise and air pollution buffering, which may include, but not be limited to earthen mounds, vegetation, fencing, or any combination thereof. The University further requests that the developer of any new facility abutting the Airport be required to incorporate noise and air pollution buffering into the site plan. This request will be submitted to the Northwest Civic Association for formal adoption.
- The Airport will encourage the City of Columbus to require the zoning standards to recognize Airport activity and development. Rezoning in the area of the Airport should be compatible with Airport activity. Noise buffers (earthen berms, landscaping, etc.) should be encouraged for development in proximity to the Airport.
- Encourage the increased utilization of the Airport by aviation-related organizations and firms for office space, meetings, and social events.
- Restrict engine "run-ups" for maintenance purposes between the hours of 11:00 p.m. and 7:00 a.m.
- Continue the ban on scheduled commercial air traffic. These activities place undue burden on the facility, while failing to further the mission of the Aviation Program.
- Support the continued development and utilization of the Airport Environs Overlay ordinance for defining residential and commercial building standards in the vicinity of the Airport.

Although not standard elements in the master plan process, these management/operational initiatives are essential for the Airport Administration to ensure the continued success of the facility, while taking into consideration its impact on the surrounding community.